NAVY PUBLIC WORKS CENTER
NORFOLK, VIRGINIA
UTILITIES DEPARTMENT

STANDARD OPERATING PROCEDURE / JOB HAZARD ANALYSIS

TITLE

SETTING UTILITY POLE - ENERGIZED CIRCUIT

PROCEDURE NUMBER

WC 624 HVE 002

DISTR:
601A
610
620
WC 624

SIGNED:_____
(DATE)

APPROVED:_____
(DATE)

SAFETY PROFESSIONAL:_____
(DATE)

MANAGEMENT OFFICIAL:_____
(DATE)

DATE:_____ REVISION DATE:_____

Purpose:
Setting a utility pole in energized circuits.

Potential Energy Sources:
1. Energized conductors within close proximity.
2. Deenergized conductors which have not been properly grounded.
3. Underground utilities.

Tools and PPE:
Tools: Bucket truck, augur truck, rubber line hoses, insulating blankets, insulator hoods, insulated pole guards, hot stick, cant hook, shovel, tamp, certified lifting sling. PPE: Insulating rubber gloves, insulating rubber sleeves, Nomex coveralls, Nomex hood, hard hat, safety glasses, safety shoes, safety harness, orange vest, and back brace if required by back injury prevention and control program. The class of rubber gloves and sleeves will depend on the exposure voltage as per the following: Class 0 - up to 1,000 volts, Class 1 - up to 7,500 volts, Class 2 - up to 17,000 volts, Class 3 - up to 26,500 volts, Class 4 - up to 36,000 volts.

References:
1. PWC Occupational Safety and Health Program Manual, PWCNORVAINST 5100.33E
2. SOP WC 624 HVE 001, Set Up and Secure Bucket/Auger Truck
3. Occupational Safety and Health Standards for General Industry (29 CFR PART 1910): Subpart I, Personnel Protective Equipment; Subpart R, Electrical Power Generation / Transmission / Distribution; Subpart S, Electrical
4. NFPA 70 E, Approach Distances To Exposed Energized Electrical Conductors and Circuit Parts
5. ANSI C2-1987, National Electrical Safety Code
6. Electrical Transmission and Distribution Safety Manual, P-1060
7. The Lineman's and Cableman's Handbook, 5th ED

Procedures:
1. Have all underground utilities located prior to arriving at job site. Contact PWC to spot Utilities owned by PWC and contact Miss Utilities to locate utilities not owned by PWC.

2. All personnel shall wear hard hats, work gloves, safety shoes, and orange vests if work is adjacent to a road or in a parking lot.

3. Check the site of the pole placement. Verify that underground utilities were inspected for and marked. Check for above ground and overhead obstructions.
Adjust pole location to have 10 foot clearance of any overhead obstruction.

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4. Set up bucket truck and auger truck. Refer to SOP WC 624 HVE 001, Set Up and Secure Bucket/Auger Truck, for details.

5. When operating a bucket truck the following safety rules will be followed.
   a) Only an authorized person, one with a current government license to operate an aerial lift, will operate the bucket.

b) Do not use the bucket truck if winds exceed the truck manufacture's specified limit.

c) Do not perform energized work in wet weather, unless an emergency.

d) Personnel in bucket will wear a safety harness with a lanyard attached to the boom or bucket.

e) Do not exceed the bucket's weight limitations.

f) Stand firmly on the floor of the bucket with both feet. Do not sit on the bucket's edge or use planks, ladders, or other such devices.

6. Insulate all energized overhead circuits which are within 3 feet of working area. Insulate any deenergized overhead circuits that have not been properly grounded as per Lockout and Tagout procedures. Personnel in the bucket shall wear Nomex coveralls, Nomex hood, safety glasses, safety shoes, insulating rubber gloves and sleeves, hard hat.

7. Prepare auger truck for use. Raise boom from cradle and release auger from boom. All personnel have to be alert to boom and auger movement. The auger operator will be alert to movement by the bucket as well as any conductors or other obstructions that the boom may contact.

8. Dig the hole. All holes will be at least 6 feet deep. As a general rule, for every 5 foot of pole greater than 30 feet add 1/2 foot to the hole depth Personnel will stay clear of the digging unless they have to clear loose dirt from around the hole or auger. When clearing dirt personnel will be alert to boom and auger movements. In addition to the PPE listed in Step 2, all personnel will wear safety glasses during the digging operation. If the hole will be left unattended, place a cover over the it.

9. Secure the auger. Ground personnel and the auger operator will be alert to a possible hazard of the auger suddenly falling while being stored in it's cradle. This possible problem is due to the auger steel sling snapping as the auger is turned into it's locking position.

10. Set new pole. Place pole in position to set with boom and certified lifting sling. Ground personnel will be alert to all pole movements and those not assisting positioning the pole will clear the area of pole movement. Once the pole is in place, insulated pole guards will be placed on the pole. Personnel assigned to handle the pole butt during setting will wear insulating rubber gloves and sleeves, and safety glasses in addition to Step 2 PPE. Personnel handling the

pole butt will not place any uninsulated part of their body on the pole. The auger operator will slowly bring the boom into position as the ground personnel guide the pole butt to the hole. As the butt is being moved, caution will be exercised to prevent the pole top from touching energized circuits. Once the pole is in the hole turn and line up pole into proper position.

11. Backfill and tamp hole. Place dirt back in hole, using shovels, and pack firm with a tamp. Once the backfill is complete, remove the lifting sling and the auger operator will secure the boom in it's cradle. Personnel will add safety glasses to Step 2 PPE.

12. Remove the insulating material from the overhead conductors. Remove insulating material in reverse order of placement. Personnel in the bucket shall wear Nomex coveralls, Nomex hood, safety glasses, safety shoes, insulating rubber gloves and sleeves, hard hat, and safety belt. If pole is to be left unworked, the pole guards will remain. If cross arms are to be hung, remove the pole guards and refer to appropriate cross arm hanging SOP.

13. Secure and remove trucks per SOP WC 624 HVE 001, Set Up and Secure Bucket/Auger Trucks.